

Study on the Development Trend of Cross-Border E-Commerce from the Perspective of Global Value Chains

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ABSTRACT

As China's cross-border e-commerce increasingly deepens its participation in the global value chain division of labor, the rapid development of cross-border e-commerce has driven the import behavior of intermediate goods and provided endogenous motivation for the growth of cross-border e-commerce. From the perspective of the global value chain, the development of cross-border e-commerce presents a new trend. Cross-border e-commerce platforms with a single transaction function can no longer meet the needs of era development under the global value chain. This paper explores the development trends of cross-border e-commerce and its impact on the global economy from the perspective of the Global Value Chain (GVC), and proposes several reflections to achieve further development of China's cross-border e-commerce.

KEYWORDS

Cross-Border E-Commerce; Global Value Chain; Development Trends

1. INTRODUCTION

In recent years, global value chain trade has rapidly developed, because the widespread adoption of communication technologies, a decrease in trade costs, and the dividends brought about by an international political environment themed on peace and development. Currently, various countries and enterprises identify their comparative advantages and find suitable segments for their own development within the global value chain, thereby achieving the optimal allocation of resources. From the perspective of the development of cross-border e-commerce, China continues to play the role of a "trade superpower," continuously exporting the highest quality industrial products globally. Undeniably, as some lower-tier production capacities gradually shift to Central and South Asia, China's proportion in the processing of intermediate goods is increasingly rising. Looking at China's total export volume in 2023, private enterprises accounted for the largest share of exports to "Belt and Road" countries, making up 55.9% of the country's total exports. Small and micro enterprises are eager to go global, with sectors such as new energy and cross-border e-commerce making Chinese brands resonate worldwide. Driven by the continuous advancement of the global value chain, China's cross-border e-commerce industry is developing at an unprecedented rate.

2. DEVELOPMENT STATUS OF CHINA'S CROSS-BORDER E-COMMERCE

Scholars in our country generally define cross-border e-commerce as transactions that transcend national and regional boundaries, where both parties' complete transactions through the internet and its related information platforms. This represents a new type of trading method that has digitalized

and electrified traditional international trade. This trade model breaks geographical limitations, enhances transaction efficiency, and alters the traditional foreign trade patterns. Since 2004, China's cross-border e-commerce has undergone significant development and transformation, evolving into a key force in the global e-commerce sector. In recent years, China's cross-border e-commerce industry has shown strong growth momentum. From 2017 to 2021, the scale of the industry grew at an astonishing rate of over 20% per year. Particularly in 2021, the trend of global consumer online activities accelerated due to the pandemic, allowing the industry scale to surpass the 6 trillion yuan mark for the first time. By 2022, despite facing challenges such as supply chain pressures caused by partial regional lockdowns and fluctuations in the international situation, the growth rate of the cross-border e-commerce industry slightly decelerated but still achieved a robust year-on-year positive growth of 9.4%, reaching a scale of 6.6 trillion yuan. In the past few years, cross-border e-commerce has not only driven the optimization of the foreign trade structure but also provided domestic enterprises with broad international markets. In recent years, Chinese e-commerce has achieved tremendous success on the global trade stage. E-commerce platforms represented by Alibaba, JD.com, Tmall, Taobao, and Vipshop have rapidly risen, promoting the continuous expansion of China's cross-border e-commerce scale. [2] The development of China's cross-border e-commerce industry can roughly be divided into three stages: the industry exploration period, the rapid expansion period, and the new stage of high-quality development, each marking significant progress and transformation in China's cross-border e-commerce.

The first stage: Industry Exploration Period; during this period, China's cross-border e-commerce focused on the development of transaction services, realizing the transition from the traditional "Yellow Pages era" to the online transaction era. B2B export enterprises in this phase, such as Alibaba International Station and Made-in-China.com, gradually transformed from information matching to a profit model mainly based on transaction commissions and value-added services. These enterprises promoted the initial development of the industry by reducing intermediary links in export trade and earning profits mainly through commissions and service fees.

The second stage: Rapid Expansion Period; this phase witnessed the continuous improvement of the ecosystem of China's cross-border e-commerce industry and the rapid expansion of market size. Relying on domestic and foreign e-commerce platforms, domestic merchants quickly opened up international markets. Platforms involved include Alibaba International Station, Amazon, etc., covering a wide range of channels, platforms, and categories, achieving full online integration. Meanwhile, the growth of independent cross-border e-commerce sites and the in-depth development of comprehensive foreign trade services provided strong support for the overseas expansion of Chinese brands.

Entering this new stage, China's cross-border e-commerce export industry began to focus on building comprehensive advantages in brand, channel, supply chain, and marketing, striving for more comprehensive and three-dimensional development. Faced with challenges brought about by fluctuations in the global order, such as changes in demand, rising costs, and declining consumer confidence, cross-border e-commerce platforms started to pay more attention to brand cultivation and provide one-stop foreign trade supply chain services for merchants. At the same time, social media, live streaming, and independent sites have become important export channels, opening up new growth spaces and opportunities. Through the development of these three stages, China's cross-border e-commerce has not only promoted the internationalization of domestic enterprises but also provided global consumers with a more diversified range of goods and services, demonstrating its irreplaceable role in the global e-commerce ecosystem.

Despite the late start and short development history of China's cross-border e-commerce industry, there are still a series of urgent problems to be solved. To create a more favorable development environment, the Chinese government has taken relevant measures and issued a series of policies. These policies aim to provide solid policy support for cross-border e-commerce, including formulating overall development plans and offering tax incentives. These measures have provided a

solid policy guarantee for the rapid development of China's cross-border e-commerce and are closely related to the strong support of the nation.

3. DEVELOPMENT TRENDS OF CROSS-BORDER E-COMMERCE FROM A GLOBAL VALUE CHAIN PERSPECTIVE

3.1. The Theoretical Foundation of the Global Value Chain

The theoretical foundation of the Global Value Chain (GVC) is a key concept in the globalized economy, whose evolution has undergone multiple stages since the late 20th century, reflecting profound changes in international trade and production methods. [3] Bozhe (2024) proposes that the current Global Value Chain is characterized by a trend of vertical shortening, an increase in regional trade agreements, increasingly consolidated added value, and development towards high-end technologies. However, in recent years, the Global Value Chain has also experienced a series of important changes. On one hand, the rapid development of digital technology has driven the digital transformation of production methods, including the application of technologies such as the Internet of Things, big data analytics, and artificial intelligence. These technologies have made the Global Value Chain more flexible and better able to adapt to changes in market demand. On the other hand, changes in trade policies and the vulnerability of global supply chains have led businesses and governments to reassess the risks and opportunities of the Global Value Chain. International trade tensions, trade barriers, and supply chain disruptions have triggered the need for reconfiguration and diversification of supply chains. Additionally, Global Value Chain theory emphasizes that in the context of globalization, different countries and regions achieve value addition of products and services through specialization and division of labor. The Global Value Chain includes design, production, marketing, distribution, and other links, with each link achieving optimal allocation on a global scale. Cross-border e-commerce, as an important component of the Global Value Chain, has realized the cross-border circulation of goods and services through digital platforms, promoting the deep integration of the Global Value Chain.

3.2. The Development Status of China's Cross-Border E-Commerce from the Perspective of the Global Value Chain

In international trade activities, multinational corporations, as the leading force, have driven new models of global resource allocation and promoted innovation in international trade production and division of labor. This trend has not only deepened China's participation in the Global Value Chain but also broadened its scope of involvement. With their unique production and operational advantages, multinational companies have become the core force in the construction of the Global Value Chain. Additionally, trade barriers pose challenges to the development of cross-border e-commerce. In the field of international goods trade, trade barriers hinder the free circulation of goods, increase trade costs and difficulties, and obstruct the successful operation of value chains. These factors constitute major obstacles for enterprises integrating into the Global Value Chain. It is noteworthy that China has been the country most investigated for anti-dumping for 21 consecutive years. Once export products are accused of dumping or countervailing by trade partners, their sales in overseas markets will undoubtedly be directly affected. China's cross-border e-commerce mainly presents three different development models. B2B cross-border e-commerce, namely online wholesale, is a business model where foreign trade enterprises exchange products, services, and information through the Internet. B2C and C2C cross-border e-commerce together constitute the category of online retail. B2C cross-border e-commerce refers to online retail activities conducted by cross-border enterprises targeting individual consumers, while C2C cross-border e-commerce refers to online retail commercial activities conducted by individuals engaged in foreign trade activities targeting individual consumers abroad. It is worth noting that C2C cross-border e-commerce is gradually

transforming and upgrading to the self-built platform M2C business model. M2C cross-border e-commerce refers to manufacturers providing their own products or services directly to consumers, aiming to reduce distribution links such as wholesalers and retailers, and achieve direct connection between manufacturers and consumers. For China, cross-border e-commerce exports are mainly dominated by B2B and B2C, while imports are dominated by B2C. The rise of the B2C model in the field of e-commerce marks its entry into a golden age of development. Although China's cross-border e-commerce is currently still dominated by the B2B model, the growth rate of the B2C model is significant. In 2016, B2B mode accounted for 88.7% of China's cross-border e-commerce transactions, while B2C mode only accounted for 11.3%. However, with the trend of order fragmentation and the gradual establishment of cross-border e-commerce brands in overseas markets, the transaction structure is gradually shifting from business-to-business to direct consumer facing, and the market share of the B2C model is rapidly increasing year by year.

4. PROBLEMS OF CHINA'S CROSS-BORDER E-COMMERCE FROM THE PERSPECTIVE OF THE GLOBAL VALUE CHAIN

4.1. Relevant Laws and Regulations Need to Be Further Improved.

At present, China still lacks specialized legal documents for cross-border e-commerce. The existing relevant laws and regulations insufficiently specify the operational procedures and regulatory requirements of cross-border e-commerce, unable to provide clear norms and guidance for the industry. If the formulation of relevant laws and regulations does not keep pace, it will lead to legal gaps or overly general provisions in several critical areas, including e-commerce, cross-border payments, cybersecurity, and consumer rights protection. This lag not only affects the enthusiasm of Chinese cross-border e-commerce platforms but also increases the risks associated with international trade. Furthermore, unclear regulatory responsibilities and outdated regulatory methods are significant challenges faced by China's cross-border e-commerce industry; involving commerce, customs, taxation, foreign exchange management, and other departments, the current laws and regulations do not clearly define the scope of responsibilities and regulatory powers of each department, leading to ambiguity and inefficiency in regulatory enforcement. As cross-border e-commerce transaction methods continue to innovate, traditional regulatory measures have struggled to meet new demands. For example, implementing effective supervision over cross-border e-commerce transactions conducted through social media platforms and self-media channels has become a substantial challenge. Additionally, the protection of consumer rights in our country is weak; consumers face language barriers, difficulties in returns and exchanges, and insufficient post-sale guarantees in cross-border e-commerce transactions. The existing laws and regulations fail to provide adequate protection and avenues for rights protection for consumers. A vast amount of user personal information and transaction data on cross-border e-commerce platforms needs proper protection, but currently, China's legislation in data protection is still imperfect, posing a high risk of consumer information leakage.

4.2. The Resistance in the International Market Further Expands.

Currently, numerous enterprises are rapidly expanding their import trade and service scale through the multi-channel sales strategies of cross-border e-commerce, employing tactics of "dividing the whole into parts." However, with the emergence of illegal activities such as counterfeit branding, tax evasion, product infringement, and intellectual property abuse, the safety and product quality issues triggered by these illegal acts could have far-reaching impacts on our country's retail market. In the early stages of cross-border e-commerce development, lax supervision led to frequent safety issues, but as the severity of these issues became increasingly apparent, China gradually strengthened its supervision to protect the interests of the nation, enterprises, and its people. In China, due to the vast

number of exported goods, some enterprises engage in non-compliant operations and lack self-discipline, making them the focus of strict international supervision. Meanwhile, some domestic enterprises lack awareness of intellectual property protection, have ambiguous product positioning, and pursue short-term benefits and sales effects, leading to the market being flooded with low-value-added, low-quality, and counterfeit cross-border e-commerce products, frequently violating intellectual property rights and damaging the international image of Chinese goods and enterprises.

4.3. The Degree of Informatization is Still in a Relatively Low State.

Currently, many small and medium-sized enterprises in our country have not yet reached a high level of specialization in information processing capabilities. This directly leads to information asymmetry in some cross-border e-commerce activities, placing these enterprises at a disadvantage in global e-commerce competition and making it difficult to fully leverage the potential of internet technology. Consequently, there is an urgent demand for computer professionals to enhance the information processing capabilities and competitiveness of enterprises.

4.4. The Development of Cross-Border Logistics Still Needs Further Improvement.

The cost problem of cross-border e-commerce logistics has always been a big problem plaguing enterprises and consumers. Due to the involvement of international transportation, tariffs, insurance and other links, logistics costs are often high. According to statistics, the proportion of logistics costs of cross-border e-commerce in China can reach more than 20% of the total cost of goods, and the logistics network of cross-border e-commerce in China is mainly concentrated in the eastern coastal areas, while the logistics services in inland areas are relatively weak. This unbalanced logistics network layout limits the regional development of cross-border e-commerce and also affects the shopping experience of consumers in inland areas. Logistics information tracking is not smooth, insufficient data sharing and other problems occur from time to time, increasing the difficulty of business operations, but also reduce consumer confidence. Due to the large differences in customs policies and clearance efficiency in different countries and regions, the clearance efficiency is relatively high in some key cross-border trade nodes, such as Hong Kong, Singapore, etc., but in some other regions, the clearance process may be more cumbersome, resulting in too long detention time for goods.

5. UPGRADE PATHWAYS FOR CHINA'S CROSS-BORDER E-COMMERCE FROM THE GLOBAL VALUE CHAIN PERSPECTIVE

5.1. Promoting Innovation in Logistics Models and Building an Efficient Cross-Border Logistics System.

Cross-border e-commerce platforms need to adopt advanced digital technologies to enhance their overall logistics service capabilities. To achieve robust development of cross-border logistics in the digital age, it is essential to coordinate the interests of cross-border e-commerce platforms, sellers, governments, and other parties to foster consensus. Through continuous cooperation, commit to a path of digital development, jointly address challenges such as logistics cost control and transportation route optimization, and construct an efficient cross-border logistics network. To improve the logistics efficiency and transparency of cross-border e-commerce, it is crucial to advance the deep development of logistics informatization. This includes creating a comprehensive logistics information system that enables real-time recording, tracking, and feedback of product flow status, ensuring that offline logistics dynamics are immediately reflected in the online system. Additionally, a professional team should be assigned to monitor the system, and in case of any abnormalities, report immediately within the information system and notify both trading parties to ensure that issues are swiftly resolved and dispute risks are minimized.

5.2. Providing Quality Information Services

Chinese cross-border e-commerce platforms need to construct efficient and stable data processing centers and cloud computing platforms to ensure the rapid processing and secure storage of massive amounts of data. At the same time, network bandwidth should be upgraded and codes optimized to reduce page loading times and provide a smooth online shopping experience. Through big data analysis, enterprises can gain an in-depth understanding of consumer behavior and accurately push personalized products. Artificial intelligence technologies such as chatbots and image recognition can enhance customer service efficiency and strengthen user interaction experiences. Additionally, by developing new shopping methods such as AR fitting mirrors and VR shopping experiences, immersive shopping experiences can be brought to consumers. Establishing strict data encryption and access control mechanisms, complying with data protection regulations of various countries, and winning consumers' trust are prerequisites for providing excellent information services. Offering high-quality services is an essential path for China's cross-border e-commerce to adapt to the digital age. By strengthening technological infrastructure construction, adopting advanced information technologies, and innovating service models, cross-border e-commerce can provide global consumers with higher quality, more convenient, and safer shopping experiences.

5.3. Improving the Payment System of Cross-border E-commerce

Improving the payment system of cross-border e-commerce is core to enhancing competitiveness and user experience. This involves integrating multiple payment methods, such as electronic wallets, bank transfers, etc., to meet the diverse needs of global consumers. To ensure transaction security, strengthening data encryption and anti-fraud measures is crucial. Additionally, optimizing the cross-border payment process, reducing currency conversion fees, and improving payment efficiency are key. These measures can enhance user trust and satisfaction, thereby promoting the development of cross-border e-commerce businesses. By integrating multiple payment methods, consumers can choose the most convenient way to pay, improving the user experience. Data encryption and anti-fraud measures ensure transaction safety, giving consumers more confidence in cross-border shopping. At the same time, optimizing the cross-border payment process speeds up payments and improves efficiency, bringing a better shopping experience to consumers. Reducing currency conversion fees also lowers the cost of shopping for consumers, increasing the attractiveness of consumption. These measures will greatly enhance user trust and satisfaction, driving the development of cross-border e-commerce businesses.

6. SUMMARY

Through an in-depth analysis of the development path of cross-border e-commerce from the perspective of the global value chain, we can clearly see the enormous potential and challenges of cross-border e-commerce in future development. To further promote the development of cross-border e-commerce, all relevant entities need to strengthen cooperation and face challenges together. To further promote its development, based on the collaborative system of the global value chain, leveraging the advantages of cutting-edge technology, continuously innovating, expanding international markets, and optimizing resource allocation, so as to drive the comprehensive progress of related industries and the transformation and upgrading of the field of cross-border e-commerce.

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